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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,812	02/04/2004	Hideaki Matsuhashi	KANEKO.010AUS	3969
7590 04/28/2005 MURAMATSU & ASSOCIATES Suite 225 7700 Irvine Center Drive Irvine, CA 92618			EXAMINER ADDISU, SARA	
			ART UNIT 3722	PAPER NUMBER

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,812

Applicant(s)

MATSUHASHI ET AL.

Examiner

Sara Addisu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
- 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/4/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Page 10, paragraph 24, line 10 and Page 11, paragraph 25, line 5, recited "... are given at (a), (b) and (c) respectively". It should be changed to "... are given at (c), (b) and (a) respectively".

Appropriate correction is required.

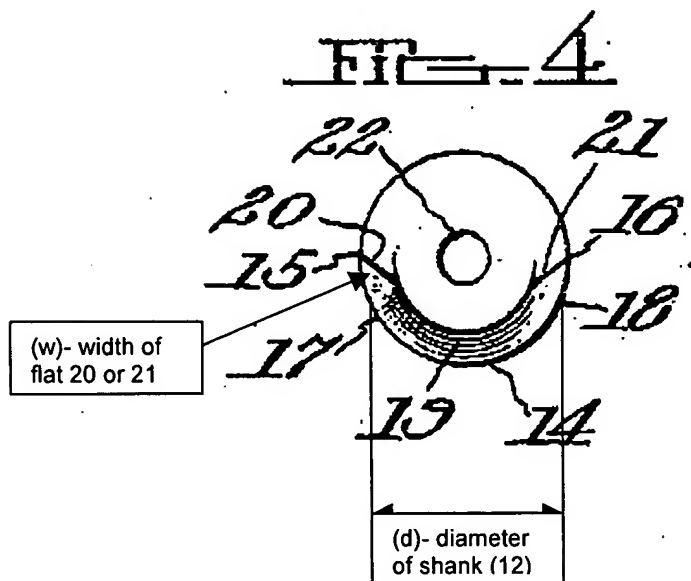
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoemaker (U.S. Patent No. 1,781,863), in view of Simpson (U.S. Patent No. 5,853,268).

Shoemaker teaches cutting tool (11) having a cylindrical shank portion (12), and a semi-cylindrical body portion (13) having a rake face, straight parallel side cutting edges (15 & 16) and end cutting edge (14) (see figures 1 & 2). Shoemaker also teaches the rake face having a flat surface (20 or 21) that has a width (w) that is smaller than the diameter (d) of the cylindrical shank portion (12) (lines 74-76 and see diagram below).



However, Shoemaker fails to teach the edge of the rake face being covered with diamond with a known surface roughness.

Simpson teaches a diamond coated insert. Simpson also teaches the use of laser to ablate the insert until the desired finish is achieved (Col. 4, lines 52-65). Examiner has taken Official Notice that it is well known in the art to grind to any desired roughness range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Shoemaker's invention such that the edge of the rake face is coated with diamond as taught by Simpson for the purpose of durability/increasing the tool life.

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Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoemaker (U.S. Patent No. 1,781,863), in view of Abe et al. (U.S. Patent No. 5,725,333).

Shoemaker teaches a cutting tool with a cylindrical shank and semi-cylindrical body portion as set forth in the above rejection.

However, Shoemaker fails to teach nose radius of curvature of not larger than 0.05 mm and/or 0.03mm at the intersection of side cutting edges and end cutting edge.

Abe et al. teaches spiral end mill having a corner portion with radius that is not more than 0.2 mm (Col. 1, lines 20-25).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to improve the working accuracy of Shoemaker's tool, since it has been held that where the general conditions of claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Applicant should further note that Specification gives no criticality to the claimed limitation (see Page 13, lines 13-15 and Page 14, paragraph 30, lines 6-8).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shoemaker (U.S. Patent No. 1,781,863).

Shoemaker teaches a tool having straight parallel side cutting edges (15 & 16) and end cutting edge (14) (page 1, line 54). Shoemaker discloses the claimed invention except for error in parallelism and error in perpendicularity of

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no larger than 3 micrometers. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have a very small tolerance for deviation of the parallelism and perpendicularity of the tool edges to improve the working accuracy of Shoemaker's tool, since it has been held that where the general conditions of claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. In re Aller, 105 USPQ 233.

Applicant should further note that Specification gives no criticality to the claimed limitation (see Page 14, paragraph 30, lines 11-14 lines and Page 15, line 1-3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Addisu at (571) 272-6082. The examiner can normally be reached on 8:30 am - 5 PM.

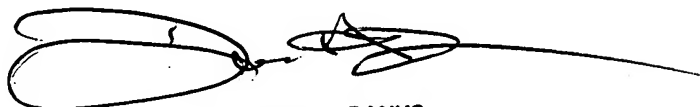
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sara Addisu
(571)272-6082

A handwritten signature in black ink, consisting of a large, stylized 'D' followed by a series of loops and a long horizontal stroke extending to the right.

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700